ABSTRACT

Rainfall data obtained from the Meteorology and Geophysics Station Airport Baddarudin II Sultan of Palembang during the last 25 years from 1986 to 2010. Rainfall annual average is 2.722,20 mm/year while the number of rainy days per year ranges between (153-246) days/year with an average of 201 days/year, the research areas include high level of rainfall.

In the research areas there are five catchment areas (DTH), the DTH I, II, III, IV, and V. Runoff discharge values on each areas are DTH I is at 17.78 m^3/second, DTH II is at 46.15 m^3/second, DTH III is at 34.23 m^3/second, DTH IV is at 47.33 m^3/second and DTH V is at 103.93 m^3/second.

To obtain aquifer parameters of the aquifer test conducted using the method of Slug Test on 4 drill holes (400 DGPGT, DGPGT 402, 404 DGPGT, DGPGT 406) in which each face of the borehole has depth of groundwater that is, -11.52 m, -4.40 m, -10.84 m and -8.88 m, respectively. Based on the results of aquifer tests in the field with Slug Test methods known to the permeability (k) aquifer ranged from (4,8727. 10^{-7} – 9,4386. 10^{-6}) m/second. Judging from the types of rocks making up the aquifer (fine sand), the permeability (k) is relatively small, the potential for groundwater in the study area is relatively low. Thus, it can be concluded that groundwater is relatively small influence on the slopes of the levels of the mine design. Groundwater flow in the area of research in general relative North-South direction.

From the analysis in the laboratory (Table 4.4) that the water of the Bingin Teluk based on the pH, TDS and the content of Fe element no one exceeds the threshold according to the Provisions of Environment Ministers , No. 113 of 2003 on Waste Water Quality Standard for Enterprises and or Coal Mining and Government Regulation No. 82 Year 2001 on Water Quality Management and Water Pollution Control. Therefore, the quality of water in Bingin Teluk are good.